The following claims are presented for examination:

1. (Currently Amended) A method comprising:

receiving, **[[at]] by** a processor-based device, a communication that comprises ~~at least one~~ **a** word **that is a natural-language word**;

generating by the processor-based device a union of terms comprising:

> **(i) a first set of word-terms, and**

> **(ii) a set of word-classes;**

selecting by the processor-based device a plurality of terms from the union of terms, wherein the selecting is based on an information-gain value of each term in the union of terms; and

~~classifying the communication by utilizing a joint classifier based on application of word information and word class information~~

performing, by the processor-based device, latent semantic indexing upon the plurality of terms to determine a category of the word.

2. (Cancelled)

3. (Currently Amended) The method of claim 1 ~~wherein~~ **further comprising:**

routing by the processor-based device ~~routes~~ the communication to a particular one of a plurality of destination terminals of **[[the]] a communication** system based on ~~a determined category~~ **the category of the word, wherein the communication system comprises the processor-based device and the plurality of destination terminals**.

4. (Currently Amended) The method of claim 1 wherein an automatic word class clustering algorithm is utilized to generate the ~~word-class information~~ **word-classes**.

5. (Currently Amended) The method of claim 1 wherein the ~~word-information and word-class information utilized is selected using~~ **selecting of the plurality of terms is further based on a percentile value applied to the respective** information-gain ~~based term selection~~ **values of the terms in the union of terms**.

6. (Currently Amended) The method of claim 5 wherein the ~~information gain based term selection determines an~~ information gain value for each ~~of a plurality of term in the union of~~ terms, ~~the information gain value being indicative of~~ **indicates the average** entropy variations over a plurality of possible categories~~, and being~~ **is** ~~determined as a function of a perplexity computation for an associated classification task~~ **for each term in the union of terms**.

7. (Currently Amended) The method of claim 1 wherein ~~a plurality of terms is generated by appending a class corpus to a word corpus~~ **the category of the word is a cell in a term-category matrix, and wherein the matrix results from the latent semantic indexing**.

8. (Currently Amended) The method of claim 1 wherein ~~a plurality of terms is generated by joining sets of multiple words with corresponding sets of word classes~~ **the generating of the union of terms further comprises:**

   (iii) a second set of word-terms.

9. (Currently Amended) The method of claim 1 wherein ~~a plurality of~~ **the union of** terms is generated by interleaving individual ~~words~~ **word-terms** with their corresponding word**-**classes.

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10. (Currently Amended) A method comprising:

receiving, **[[at]] by** a processor-based device, a communication that comprises ~~at least one~~ **a word that is a natural-language** word;

generating by the processor-based device a union of terms comprising:

(i) a set of word-terms, and

(ii) a set of word-classes;

selecting by the processor-based device a plurality of terms from the union of terms, wherein the selecting is based on applying a percentile value to an information-gain value of each term in the union of terms; and

classifying the communication by utilizing a joint classifier ~~based on word information and word-class information~~ **upon the plurality of terms**, wherein the joint classifier comprises at least one term-category matrix ~~characterizing words and word-classes selected using~~ **that results from the selecting based on** information**-**gain ~~based term-selection~~ **values and from applying latent semantic indexing to the plurality of terms**.

11. (Currently Amended) The method of claim 10 wherein a cell *i, j* of the term-category matrix comprises ~~information indicative of a relationship involving~~ **a classification by the processor-based device of** an *i-th* selected term **[[and]] into** a *j*-th category.

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12. (Currently Amended) A method comprising:

receiving, [[at]] **by** a processor-based device, a communication that comprises ~~at least one~~ **a word that is a natural-language** word;

generating by the processor-based device a union of terms comprising:

(i) a set of word-terms, and

(ii) a set of word-classes; and

selecting by the processor-based device a plurality of terms from the union of terms, wherein the selecting is based on an information-gain value of each term in the union of terms, and

~~classifying the communication by utilizing a joint classifier to determine a category for the communication based on word information and word class information;~~

~~wherein the determination of the joint classifier is based on an information gain based term selection; and~~

wherein the ~~information gain based term selection~~ **selecting comprises**:

i) ~~calculates~~ **calculating an** information~~-~~gain value[[s]] for each [[word]] **term** in the ~~first communication~~ **union of terms**[[,]] ~~a given one of the terms comprising a word or a word class~~ **that corresponds to the word**,

ii) ~~sorts~~ **sorting** the terms **in the union of terms in a descending order of** ~~by their~~ information~~-~~gain value[[s]] ~~in a descending order~~,

iii) ~~sets~~ **setting** a threshold ~~as the~~ **of an** information~~-~~gain value corresponding to a specified percentile, and

iv) ~~selects~~ **selecting** the terms **from the union of terms** having an information~~-~~gain value greater than or equal to the threshold **to generate a plurality of terms**.

13. (Currently Amended) The method of claim 12 wherein the selected terms **in the plurality of terms** are processed **by the processor-based device** to form a term-category matrix ~~utilizable by the~~ **from which a** joint classifier ~~in determining~~ **determines at least one** one or more categories for the ~~at least one~~ word.

14. (Currently Amended) The method of claim 12 ~~wherein the~~ **further comprising:**

performing by a joint classifier ~~comprises a~~ joint latent semantic indexing ~~classifier~~ **upon the plurality of terms to determine a category for the word, wherein the processor-based device comprises the joint classifier**.

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15. (Currently Amended) An apparatus comprising:

a processor-based device operative to:

receive a communication that comprises ~~at least one~~ **a** word **that is a natural-language word**; and

[[to]] classify the communication by utilizing a joint classifier ~~based on~~ **that is operative to:** ~~application of word information and word-class information.~~

generate a union of terms comprising:

    (i) a set of word-terms, and

    (ii) a set of word-classes;

select a plurality of terms from the union of terms, based on an information-gain value of each term in the union of terms; and

perform latent semantic indexing upon the plurality of terms to determine a category of the word.

16. (Currently Amended) The apparatus of claim 15 wherein the processor-based device comprises a switch **that is operative to route the communication, based on the category of the word, to a destination terminal of a communication system that comprises the apparatus and the destination terminal**.

17. (Currently Amended) The apparatus of claim 15 wherein ~~the processor-based device comprises a processor coupled to a memory~~ **the category of the word is a**

cell in a term-category matrix, and wherein the matrix results from the latent
semantic indexing.

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18. (Currently Amended) An article of manufacture comprising**:**

a machine-readable storage medium **that is a non-transitory storage medium**
and that ~~containing~~ **comprises** software code that when executed implements the steps
of:

receiving a communication that comprises ~~at least one~~ **a** word **that is a**
natural-language word;

generating a union of terms comprising:

> **(i) a set of word-terms, and**

> **(ii) a set of word-classes;**

selecting a plurality of terms from the union of terms, wherein the selecting
is based on an information-gain value of each term in the union of terms;

performing latent semantic indexing upon the plurality of terms to
determine a category of the word, wherein the category of the word is a cell in a
term-category matrix that results from the latent semantic indexing; and

> ~~classifying the communication by utilizing a joint classifier based on~~
~~application of word information and word class information~~

> **routing the communication to a destination terminal in a communication**
system that comprises the machine-readable storage medium and the destination
terminal.

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